

## CRC Handbook of Chemistry and Physics (3rd Electronic Edition)

Ionization  
Energies of  
Gas-Phase  
Molecules

Show Hits Only Entire Table

1 matches in 1022 rows

Select Field:

Find:

material or substance name

oxygen

☒ Exact  
match☐ Start of  
field☐ Any part  
of field

(ionization energy)

SEARCH TABLE

CANCEL SEARCH

SELECT ROWS

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table

✓	no.	material or substance name	synonym	mol. formula	common formula	CAS Registry no.	ionization energy (eV)	enthalpy of formation, free ion (kJ/mol)
<input type="checkbox"/>	746	Oxomethyl (HCO)		CHO	HCO	2597-44-6	(8.55)	826
<input checked="" type="checkbox"/>	747	Oxygen		O <sub>2</sub>	O	7782-44-7	12.0697 ± 0.0002	1165
<input type="checkbox"/>	748	Oxygen (atomic)		O	O <sub>2</sub>	17778-80-2; [7782-44-7]	13.61806	1563
<input type="checkbox"/>	749	Ozone		O <sub>3</sub>	O <sub>3</sub>	10028-15-6	12.43	1342
<input type="checkbox"/>	750	Palladium		Pd	Pd	7440-05-3	8.3367	1181
<input type="checkbox"/>	751	Pentaborane(9)		B <sub>5</sub> H <sub>9</sub>	B <sub>5</sub> H <sub>9</sub>	19624-22-7	9.90 ± 0.04	1028
<input type="checkbox"/>	752	Pentachloroethane	Refrigerant 120	C <sub>2</sub> HCl <sub>5</sub>		76-01-7	(11.0)	919
<input type="checkbox"/>	753	<i>cis</i> -1,3-Pentadiene	<i>cis</i> -Piperylene	C <sub>5</sub> H <sub>8</sub>		1574-41-0; [504-60-9]	8.63 ± 0.03	914
<input type="checkbox"/>	754	<i>trans</i> -1,3-Pentadiene	<i>trans</i> -Piperylene	C <sub>5</sub> H <sub>8</sub>		2004-70-8; [504-60-9]	8.59 ± 0.02	905
<input type="checkbox"/>	755	1,4-Pentadiene		C <sub>5</sub> H <sub>8</sub>		591-93-5	9.60 ± 0.02	1032
<input type="checkbox"/>	756	Pentafluorobenzene		C <sub>6</sub> HF <sub>5</sub>	C <sub>6</sub> HF <sub>5</sub>	363-72-4	(9.63)	122
<input type="checkbox"/>	757	Pentafluorophenol		C <sub>6</sub> HF <sub>5</sub> O		771-61-9	(9.20)	-71
<input type="checkbox"/>	758	2,3,4,5,6-Pentafluorotoluene		C <sub>7</sub> H <sub>3</sub> F <sub>5</sub>		771-56-2	(9.4)	64
<input type="checkbox"/>	759	Pentanal	Valeraldehyde	C <sub>5</sub> H <sub>10</sub> O		110-62-3	9.74 ± 0.04	709
<input type="checkbox"/>	760	Pentane		C <sub>5</sub> H <sub>12</sub>		109-66-0	10.28 ± 0.10	845
<input type="checkbox"/>	761	2,4-Pentanedione	Acetylacetone	C <sub>5</sub> H <sub>8</sub> O <sub>2</sub>		123-54-6	8.85 ± 0.01	469
<input type="checkbox"/>	762	Pentanoic acid	Valeric acid	C <sub>5</sub> H <sub>10</sub> O <sub>2</sub>		109-52-4	(≈10.53)	≤527

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Ionization  
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Gas-Phase  
Molecules

[ 1 matches ] in [ 1022 rows ]

Show Hits Only Entire Table

Select Field:

Find:

material or substance name

argon


☒ Exact  
match☐ Start of  
field☐ Any part  
of field

(ionization energy)

SEARCH TABLE

CANCEL SEARCH

SELECT ROWS

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table

✓	no.	material or substance name	synonym	mol. formula	common formula	CAS Registry no.	ionization energy (eV)	enthalpy of formation, free ion (kJ/mol)
<input type="checkbox"/>	15	Acrylic acid	2-Propenoic acid	C <sub>3</sub> H <sub>4</sub> O <sub>2</sub>		79-10-7	10.60	701
<input type="checkbox"/>	16	Acrylonitrile	Propenenitrile	C <sub>3</sub> H <sub>3</sub> N	CH <sub>2</sub> =CHCN	107-13-1	10.91 ± 0.01	1237
<input type="checkbox"/>	17	Actinium		Ac	Ac	7440-34-8	5.17	905
<input type="checkbox"/>	18	Allene		C <sub>3</sub> H <sub>4</sub>	CH <sub>2</sub> =C=CH <sub>2</sub>	463-49-0	9.692 ± 0.004	1126
<input type="checkbox"/>	19	Allyl alcohol	2-Propen-1-ol	C <sub>3</sub> H <sub>6</sub> O		107-18-6	9.67 ± 0.05	808
<input type="checkbox"/>	20	Allylamine	2-Propen-1-amine	C <sub>3</sub> H <sub>7</sub> N		107-11-9	(8.76)	891
<input type="checkbox"/>	21	Aluminum		Al	Al	7429-90-5	5.98577	905
<input type="checkbox"/>	22	Aluminum bromide	Aluminum tribromide	AlBr <sub>3</sub>	AlBr <sub>3</sub>	7727-15-3	(10.4)	593
<input type="checkbox"/>	23	Aluminum chloride	Aluminum trichloride	AlCl <sub>3</sub>	AlCl <sub>3</sub>	7446-70-0	(12.01)	573
<input type="checkbox"/>	24	Aluminum fluoride	Aluminum trifluoride	AlF <sub>3</sub>	AlF <sub>3</sub>	7784-18-1	≤15.45	≤282
<input type="checkbox"/>	25	Aluminum iodide	Aluminum triiodide	AlI <sub>3</sub>	AlI <sub>3</sub>	7784-23-8	(9.1)	673
<input type="checkbox"/>	26	Aluminum monobromide		AlBr	AlBr	22359-97-3	(9.3)	913
<input type="checkbox"/>	27	Aluminum monochloride		AlCl	AlCl	13595-81-8	9.4	855
<input type="checkbox"/>	28	Aluminum monofluoride		AlF	AlF	13595-82-9	9.73 ± 0.01	673
<input type="checkbox"/>	29	Aluminum monoiodide		AlI	AlI	29977-41-1	9.3 ± 0.3	965
<input type="checkbox"/>	30	Americium		Am	Am	7440-35-9	5.9738 ± 0.0002	860
<input type="checkbox"/>	31	Amidogen		H <sub>2</sub> N	NH <sub>2</sub>	17655-31-1	11.14 .01	1264
<input type="checkbox"/>	32	3-Amino-1-propanol	Propanolamine	C <sub>3</sub> H <sub>9</sub> NO		156-87-6	(9.0)	651
<input type="checkbox"/>	33	Ammonia		H <sub>3</sub> N	NH <sub>3</sub>	7664-41-7	10.070 ± 0.020	925
<input type="checkbox"/>	34	Aniline	Benzenamine	C <sub>6</sub> H <sub>7</sub> N	C <sub>6</sub> H <sub>5</sub> NH <sub>2</sub>	62-53-3	7.720 ± 0.002	832

<input type="checkbox"/>	35	Anisole	Methoxybenzene	C <sub>7</sub> H <sub>8</sub> O		100-66-3	8.22 ± 0.03	725
<input type="checkbox"/>	36	Anthracene		C <sub>14</sub> H <sub>10</sub>		120-12-7	7.439 ± 0.006	948
<input type="checkbox"/>	37	Antimony		Sb	Sb	7440-36-0	8.64	1096
<input type="checkbox"/>	38	Antimony(III) chloride	Antimony trichloride	Cl <sub>3</sub> Sb	SbCl <sub>3</sub>	10025-91-9	(≈10.7)	≤719
<input checked="" type="checkbox"/>	39	Argon		Ar	Ar	7440-37-1	15.75962	1521
<input type="checkbox"/>	40	Arsenic		As	As	7440-38-2	9.8152	1250
<input type="checkbox"/>	41	Arsenic(III) chloride	Arsenic trichloride	AsCl <sub>3</sub>	AsCl <sub>3</sub>	7784-34-1	(10.55 ± 0.025)	754
<input type="checkbox"/>	42	Arsenic(III) fluoride	Arsenic trifluoride	AsF <sub>3</sub>	AsF <sub>3</sub>	7784-35-2	(12.84 ± 0.05)	452
<input type="checkbox"/>	43	Arsine	Arsenic hydride	AsH <sub>3</sub>	AsH <sub>3</sub>	7784-42-1	(9.89)	1021
<input type="checkbox"/>	44	<i>trans</i> -Azoxybenzene		C <sub>12</sub> H <sub>10</sub> N <sub>2</sub> O		495-48-7; [21650-65-7]	(8.1)	1123
<input type="checkbox"/>	45	Azulene	Bicyclo[5.3.0]decapentaene	C <sub>10</sub> H <sub>8</sub>		275-51-4	7.38 ± 0.05	1001
<input type="checkbox"/>	46	Barium		Ba	Ba	7440-39-3	5.21170	683
<input type="checkbox"/>	47	Barium oxide	Barium monoxide	BaO	BaO	1304-28-5	6.91 ± 0.06	543
<input type="checkbox"/>	48	Benzaldehyde	Benzenecarboxaldehyde	C <sub>7</sub> H <sub>6</sub> O	C <sub>6</sub> H <sub>5</sub> CHO	100-52-7	9.49 ± 0.02	878
<input type="checkbox"/>	49	Benzamide	Benzoic acid amide	C <sub>7</sub> H <sub>7</sub> NO		55-21-0	(9.25)	792
<input type="checkbox"/>	50	Benzene	[6]Annulene	C <sub>6</sub> H <sub>6</sub>		71-43-2	9.24378 ± 0.00007	975
<input type="checkbox"/>	51	Benzenecetic acid	Phenylacetic acid	C <sub>8</sub> H <sub>8</sub> O <sub>2</sub>		103-82-2	(8.26)	479
<input type="checkbox"/>	52	Benzenethiol	Phenyl mercaptan	C <sub>6</sub> H <sub>6</sub> S	C <sub>6</sub> H <sub>5</sub> SH	108-98-5	(8.32)	915
<input type="checkbox"/>	53	Benzoic acid	Benzenecarboxylic acid	C <sub>7</sub> H <sub>6</sub> O <sub>2</sub>		65-85-0	(9.3)	604
<input type="checkbox"/>	54	Benzonitrile	Phenyl cyanide	C <sub>7</sub> H <sub>5</sub> N	C <sub>6</sub> H <sub>5</sub> CN	100-47-0	9.70 ± 0.01	1154
<input type="checkbox"/>	55	Benzophenone	Diphenyl ketone	C <sub>13</sub> H <sub>10</sub> O		119-61-9	9.08 ± 0.05	926
<input type="checkbox"/>	56	<i>p</i> -Benzoquinone		C <sub>6</sub> H <sub>4</sub> O <sub>2</sub>		106-51-4	10.01 ± 0.06	844
<input type="checkbox"/>	57	Benzoyl chloride	Benzenecarbonyl chloride	C <sub>7</sub> H <sub>5</sub> ClO	C <sub>6</sub> H <sub>5</sub> COCl	98-88-4	(9.53)	815
<input type="checkbox"/>	58	Benzyl alcohol	Phenylmethanol	C <sub>7</sub> H <sub>8</sub> O		100-51-6	(8.3)	701
<input type="checkbox"/>	59	Benzylamine		C <sub>7</sub> H <sub>9</sub> N		100-46-9	(8.64)	917
<input type="checkbox"/>	60	Berkelium		Bk	Bk	7440-40-6	6.23	911
<input type="checkbox"/>	61	Beryllium		Be	Be	7440-41-7	9.32263	1224
<input type="checkbox"/>	62	Beryllium oxide	Beryllia	BeO	BeO	1304-56-9	(10.1 ± 0.4)	1111
<input type="checkbox"/>	63	Biphenyl	Diphenyl	C <sub>12</sub> H <sub>10</sub>		92-52-4	8.23 ± 0.10	977

<input type="checkbox"/>	64	Bismuth		Bi	Bi	7440-69-9	7.2855	908
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